

Supplemental Table

Table S1: Summary of differentially expressed genes associated with Grass MATA MPL SCIT

Cell type	Gene	Type	Expression fold -change	Expression p-value (p<0.05)	Potential Biomarkers of AIT (EAACI 2017)*
Basophils/eosinophils	CCL2	chemokine	↑1.778	0.0118	✓
	CCL7	chemokine, eotaxin	↑1.778	0.0118	
	CCL8	chemokine	↑1.778	0.0118	
	CCL11	chemokine, eotaxin	↑1.778	0.0118	
	CCL13	chemokine	↑1.825	0.0102	N/A
	CCL24	chemokine, eotaxin	↑1.765	0.012	
	CCL26	chemokine, eotaxin	↑1.589	0.0128	
	EPX	enzyme	↑1.307	0.00584	
T lymphocytes/B lymphocytes/Dendritic cells/monocytes chemotaxis, adherence/migration	CCL16	chemokine, cytokine	↑1.782	0.00783	
	CCL17	chemokine/cytokine	↑1.802	0.0106	
	CCL19	chemokine	↑1.774	0.0109	N/A
	CCL22	chemokine	↑1.733	0.0122	
	ICAM2	transmembrane receptor	↑1.246	0.0482	
Th1 cells	IL2	cytokine	↑1.843	0.00738	✓
	CSF2	cytokine	↑1.82	0.01	N/A
	IL3	cytokine	↑1.798	0.0113	✓
	CSF3	cytokine	↑1.719	0.0124	N/A
	IL12B	cytokine	↑1.617	0.0137	✓
	IFNβ1	cytokine	↑1.6	0.0158	N/A
	IL27	cytokine	↑1.518	0.0148	N/A
	CD80	transmembrane receptor	↑1.306	0.00686	✓
	TNF	cytokine	↑1.275	0.0177	✓
	IL18	cytokine	↑1.244	0.0203	✓
	CD4	transmembrane receptor	↑1.164	0.0126	N/A
	IL12RB2	transmembrane receptor	↑1.109	0.0445	✓

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Cell type	Gene	Type	Expression fold -change	Expression p-value (p<0.05)	Potential Biomarkers of AIT (EAACI 2017)*
Th2/Th17 cells	IL13	cytokine	↑1.786	0.0106	✓
	IL9	cytokine	↑1.778	0.0118	✓
	IL25	cytokine	↑1.727	0.0149	N/A
	IL4	cytokine	↑1.624	0.00738	✓
	IL24	cytokine	↑1.184	0.0362	N/A
	IL5	cytokine	↑1.07	0.0446	✓
	IL21	cytokine	↑1.786	0.0099	N/A
T regulatory	NR4A3	ligand-dependent nuclear receptor	↑1.645	0.0108	N/A
	NR4A1	ligand-dependent nuclear receptor/member of Nur77-RXRa family	↑1.334	0.0241	N/A
	FOXP3	transcription regulator	↑1.288	0.0137	✓
	STAT5A	transcription regulator	↑1.238	0.0226	N/A
	RUNX1	transcription regulator	↑1.124	0.0357	N/A
Antigen presentation	CMA1	serine protease	↑1.872	0.00862	
	KITLG	growth factor	↑1.762	0.0123	
	TPSAB1/TPSB2	peptidase	↑1.768	0.00802	N/A
	KIT	transmembrane receptor	↑1.411	0.0027	
	HLA-DMA	transmembrane receptor	↑1.155	0.0383	
B cells	CD70	transmembrane receptor (TNF-receptor superfamily)	↑1.641	0.00135	N/A
	CD1A	transmembrane receptor	↑1.392	0.00976	
Toll-like Rc signalling (TLR4)	TOLLIP	other	↑1.362	0.0296	
	TAB1	TGFβ activated kinase	↑1.303	0.0181	
	MAP3K7	kinase	↓-1.091	0.0456	N/A
	IRF7	interferon regulatory factor	↓-1.246	0.0397	
non-classified	GATA4	transcription regulator	↑1.775	0.0118	N/A

* M. H. Shamji, J. H. Kappen, M. Akdis et al., "Biomarkers for monitoring clinical efficacy of allergen immunotherapy for allergic rhinoconjunctivitis and allergic asthma: an EAACI Position Paper", *Allergy*, vol. 72, no. 8, pp. 1156-1173, 2017.